Requirements Document GTCP660-4 APU

- Acquisition of one (1) Serviceable Garrett Turbine Engine Co. GTCP660-4 P/N 380716-1-13 gas turbine APU engine configured for a Boeing 747 legacy aircraft.
- The contractor shall provide one (1) Serviceable Garrett Turbine Engine Co. GTCP660-4 P/N 380716-1-13 gas turbine APU engine configured for the B747 aircraft with a minimum 3,000 APU hours remaining.
- Provide fully assembled, tested, preserved, zero time since APU engine overhaul or repair to the following criteria:
    - A minimum of 3,000 APU hours remaining
    - With one or two installed generators, configuration will be confirmed by NASA after purchase
    - APU must include Electronic Turbine Controls and Transfer box
    - Engine Start-Up Exhaust Gas Temperature within test cell limits
    - A minimum No Load Exhaust Gas Temperature (EGT) Margin of 50°F
    - With tested at Load: Bleed Flow, Bleed Pressure, and Bleed Temp meeting or exceeding the minimum requirements per the OEM overhaul manual.
    - With tested at Load: Fuel Flow meeting or less than the maximum requirements per the OEM overhaul manual.
- **Compressor module:**
    - Zero time since Overhaul or repair as long as TSO does not exceed 5,300 APU hours.
- **Turbine module**:
    - Zero time since Overhaul or repair/HSI as long as TSO does not exceed 5,300 APU hours.
- **Gearbox:**
    - Zero time since Overhaul or inspection as long as TSO does not exceed 11,000 APU hours.
- Review and provide copies of all associated documents for the engine, including previous overhauls and repairs.

- Review and provide copies of all previous documented repairs and incorporated engineering directives.
- Review and provide copies of all AD's applicable to the engine
- Support NASA technical and quality assurance personnel to perform acceptance inspections of the hardware and documentation prior to the engine preservation.
- Provide NASA with one (1) Serviceable Garrett Turbine Engine Co. GTCP660-4 P/N 380716-1-13 gas turbine APU engine with zero time since Overhaul/ Repair.
- Provide NASA with the original Engine Log Book
- Provide NASA a detailed Life Limited Parts (LLP) list for the GTCP660-4 APU engine
- Provide back to birth trace records of individual Life Limited Parts in the engine from OEM build date
- Provide a detailed summary of all incorporated AD's / SB's
- Provide all Federal Aviation Administration (FAA) required documentation for aircraft engine airworthiness. Provide the FAA Form 8130-3 airworthiness certificate.
- Provide a Bill of Sale for the APU engine
- Deliver APU engine (FOB Destination) to Dryden Flight Research Center (DFRC), Edwards CA.
- Provide all required engineering and engine performance data
- Data Package
    - Life Limited Parts (LLP) List
    - FAA form 8130-3 for return to service
    - Original Engine Log Book
    - List of all Airworthiness Directives Embodied
    - List of all Service Bulletins Embodied
    - LLP Report Signed by Last Operator
    - Non-Incident Statement Signed by Last Operator
    - Historical Repair Records
    - Bill of Sale for the APU engine